

The
Summer and Autumnal
Diseases
of the Western Country; -
An Inaugural Dissertation,
By Elisha Embree.
Philadelphia, 1823.

passed March 29th 1823.

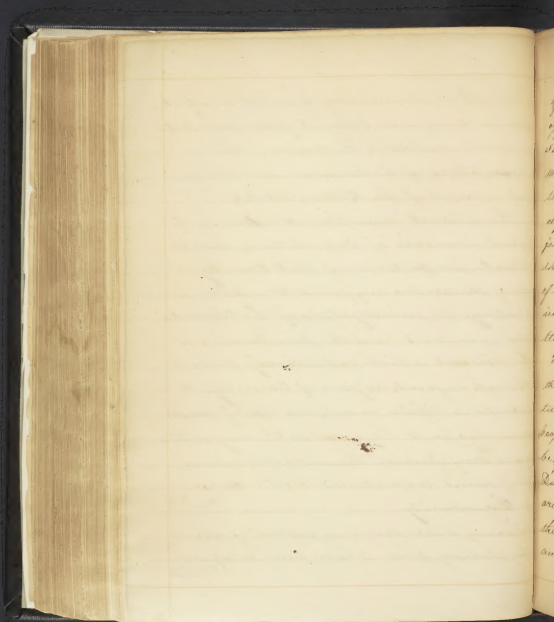
[Faint, illegible handwriting on lined paper]

[Faint, illegible handwriting on the right edge of the page]

In endeavouring to select a Subject
for an Inaugural Essay, I find none that
is more adapted to the purpose, than a
description of the Summer and Autumnal
diseases of the Western States.

The almost insulated condition, the
rapid increase of Population, and po-
litical importance of that Country,
are of themselves sufficient to accord, in-
teresting, an investigation of the character-
istic features, and the peculiarities of
the diseases which extensively prevail
through a great region of Country, to
ascertain their causes, and apply proper
remedies will be a valuable acquisition
to our professional knowledge, and of
the greatest importance to the cause
of Humanity.

During a residence of several years in
the State of Ohio, I have had an opportunity



of making many observations on the Nature
 of the prevailing Diseases, and have had
 some practical experience in the treat-
 ment and cure of them; although much more
 time and a greater opportunity, would be ne-
 cessary, to give a complete view of the sub-
 ject. My object in this paper is merely to
 sketch the nature, treatment and causes
 of the diseases, which annually prevail
 in a district of Country hitherto but lit-
 tle noticed by Medical Authors.

Before entering into a further detail of
 the subject, a few remarks on the na-
 ture of the Climate, the habits of the
 people, and their manner of living, may
 be of service.

During the Winter months, the Winds
 are from the South West, passing from
 the Rocky Mountains, they sweep over
 an extensive portion of high flat, or

[Faint, illegible handwriting on lined paper]

[Faint, illegible handwriting on the right edge of the page]

table land, sometimes carrying to the North
producing a cold and clear Atmosphere,
which gives a peculiar degree of health act-
ivity and vigour to ^{the} Inhabitants.

In the month of March the wind is very
variable, with frequent rain and slight
snow storms, and the temperature of the
Atmosphere unequal. The diseases
consequently are of an inflammatory na-
ture.

In April and May the wind is more regu-
lar, and mostly from the South West, the tem-
perature moderate and gradually increas-
ing; During these months the diseases assume
more of Bilious tendency, producing a
form of fever different from any that I have
seen described in the Books. It commen-
ces its attack, with an heavy Chill with-
out any premonitory symptoms, and is
soon followed by nausea and vomiting

422

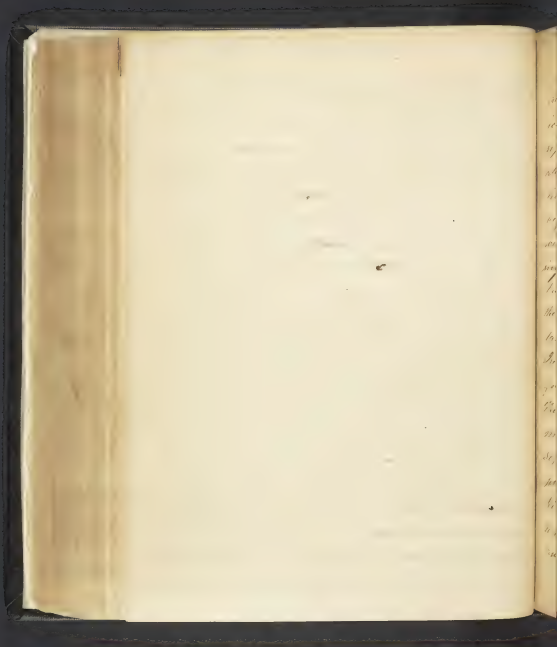
3

great pains in the Head, flushed countenance, with much anxiety. The pulse full strong and not frequent, The skin dry, and the tongue covered with a yellowish brown ~~coat~~ coat, and the thirst not very great, the bowels either very costive or very free, a slight delirium generally prevails, and the patient is sometimes carried off with all the symptoms of apoplexy; but this is seldom the case when active remedies have been used. It is different from *Synochus* in its mode of attack, and termination, for we very seldom find it terminating in the *Synchus*. — There is much greater biliary derangement than in the *Synochus*, and the system is not so generally affected. It has no regular remissions, and gradually leaves the patient in six or eight days. It is generally cured by the free use of the bland and active purgatives.

In the month of June and July the rains
 very gross storm that is south west. The latter
 followed by continued rains and sudden
^{showers.} producing great floods in the small rivers
 and creeks. The rise of the larger rivers
 depend upon the melting of the snow and
 water on the mountains, which generally is
 in March or April, over flowing their
 banks extensive, and thus becoming a
 fruitful source of disease. The tempera-
 ture of the air increases much, and the
 windings frequently warm, the
 vegetation luxuriant and rapid in its
 growth. The inflammatory nature of the
 diseases increases, and the virulence of the
 miasmata increasing. ~~Casus~~ Cholera dysen-
 teria becomes epidemic in nearly all parts
 of the country. In the latter part of July
 cholera morbus and dysentery make their
 appearance.



In August and September the vegetables
having reached its maturity, now fades rap-
idly, as is scorched by the intense heat
of the Sun; the temperature of the Atmos-
phere is at its height in July and August;
although the evenings of the latter are in-
genially cool and refreshing. The rains
are very heavy and the fogs frequent
in low grounds, and in the vicinity of
rivers. Rain seldom appears excepting in
sudden showers attended with much thun-
der and lightning. The Springs either be-
come dry or evaporated before they trickle
from their sources, the creeks and small
streams partake of the nature of ponds,
and the luxuriant crop of vegetables is
now undergoing a state of rapid decompo-
sition, filling the Atmosphere with a vari-
ety of exhalations. During this time
the winds prevail from the Southwest



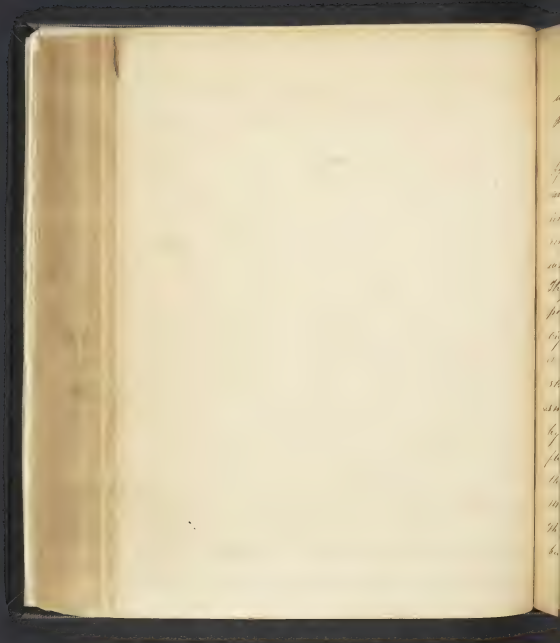
and South, coming from the Gulf of Mex-
ico, passing up the great valley of the Missis-
sippi, sweeping over a large portion of
alluvial land, and extensive prairies,
laden with the effluvia of decaying
vegetables, impregnating the atmosphere
with their noxious principles, then pass-
ing over an extensive, flat, and uncult-
ivated forest, and finally arriving at
the fertile improvements of the inhabi-
tants of the Western States.

In the early part of August Intermittent
fevers, and Dysentery, generally prevail;
the fever, gradually changing to the in-
termittent and continued forms; and in
September frequent epidemics of Ty-
phoid type, which in some places ex-
hibits a degree of malignancy equal
to that which has appeared in any of
our Atlantic Cities.



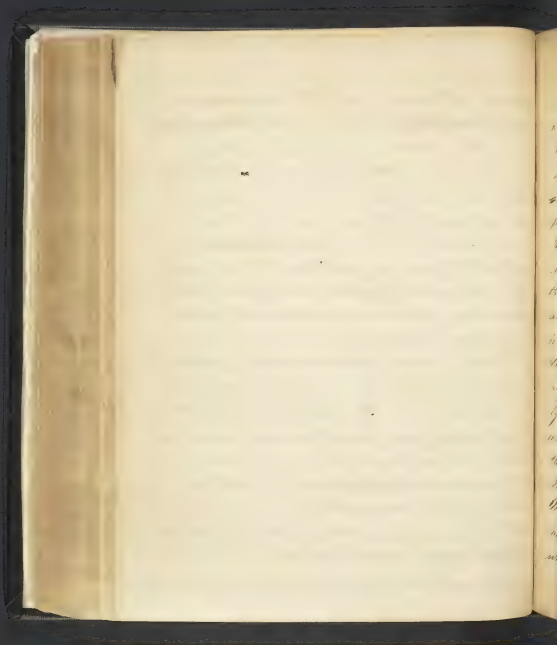
8
The temperature in October is more mild,
a gentle breeze from the West, frequently
renders the afternoons pleasant and the
evenings cool, but ^{these} alternate with
warm sun, & sometimes sudden showers of rain.
About the middle of this month the
temperature is reduced to the freezing
point, which puts our affections into the state
of continual diseases, or changes them
into an inflammatory character.

The month of November is characterized
by that peculiar kind of weather called
Indian summer. The atmosphere is
thick, hazy, or smoky, that the sun
is generally obscured, while the temper-
ature is mild and agreeable. The contin-
ual diseases entirely disappear, the
swart and sallow countenance, is exchan-
ged for the full and rounded features,
and finally December bestows on the



weary Physicians, and the convalescent Patient, Health, Vigour and Happiness.

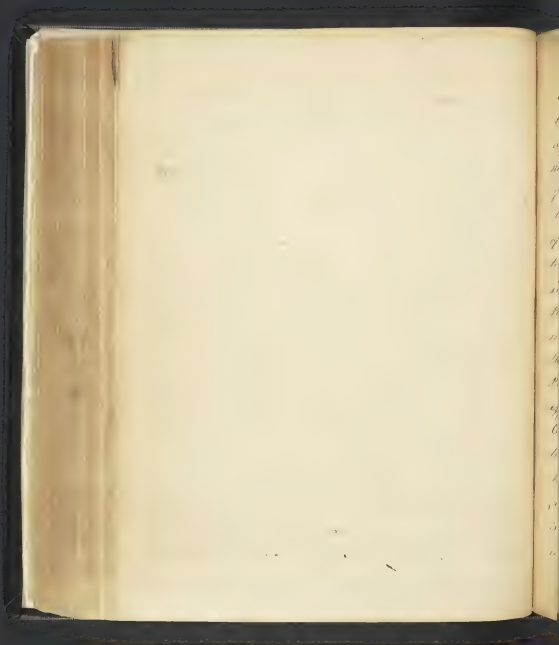
This extensive country is inhabited by People from all parts of the United States, and many parts of Europe; Their diseases in all probability, are in some measure influenced by the change of Climate to which they are subjected on their arrival; They are generally of a large and robust appearance, their constitutions strong and vigorous. Their exercise of an active nature, and consequently their Muscular system strongly marked. In country places and small Villages they are much exposed by sleeping in open Houses and on ground floors. In the larger Towns they have all the necessary comforts of life, without many of the luxuries of large Cities. There is consequently less variety of disease but of a more active nature.



The manner of living among the Agricultural
ists is generally simple, plain and good.
In the large Towns, they have every thing
that a fertile country, luxuriant in vege-
tation and number, gives a soil of rapid im-
provement, can produce.

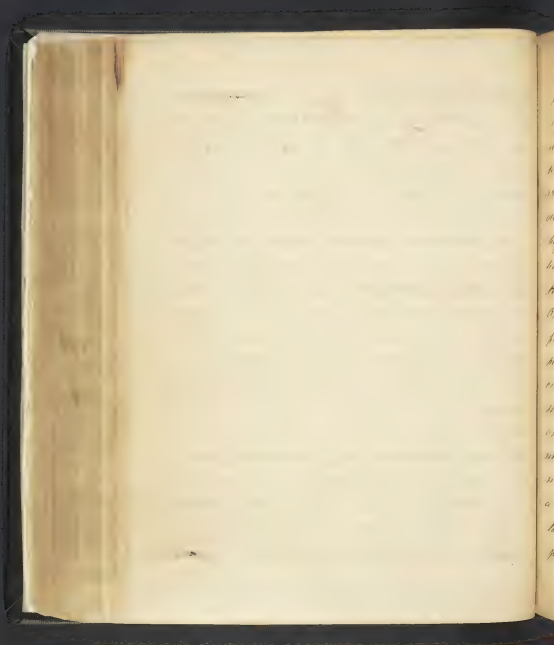
With extreme regret, I am obliged to ac-
knowledge, that spirituous liquors are
the common articles of Drink; they are
among the staple commodities, and are used
in great abundance. Their effects on the
German System are too well known to
require an illustration. They undoubt-
edly act as a predisposing cause, to a large
number of the cases of Bilious Fever in
the Western States.

In the Months of March, April, and
May, the Diseases require, but little
variety of treatment different from that
used in inflammatory complaints in



other parts of the country, expecting that the debilitating remedies are carried to a greater extent. The Brain ^{and the lungs} are the organs most generally affected at this season of the year. In May the biliary organs are much deranged in their functions, and the power of the stomach much impaired. Purgative medicines are used largely, and those in which calomel is an ingredient are the most valuable. As soon as the inflammatory stage of the disease ~~is~~ is removed the Tonic Medicines especially the Peruvian Bark is resorted to with good effect.

Cholera Infantum seems to have few peculiarities, perhaps the only variations from the ordinary character is the greater degree of malignancy. The treatment since is very various, and in many instances unsuccessful. Some Physicians of ~~extensive~~ ^{extensive} experience



practice, depend entirely upon ~~the~~
 symptoms. Others connect them with the
 warm bath, which it turns the fluids
 to the surface of the body, and the cuticles
 are thereby relaxed. Many purge freely un-
 der the supposition that there is some mor-
 bid matter in the intestines which must
 be removed, while others are mild laxa-
 tives, and *Allopathetics*, such as, *Sulphur*
Opium and *Spicacava*, two grains of the
 former, and one grain of each of the latter
 powdered and mixed, divided into six powders
 and given every two hours. Perhaps if this
 method was alternated with the first, and
 assisted by the warm bath something
 might be gained. *Cholera morbus* has
 nearly the same symptoms; arises through
 a similar cause, and requires a similar
 sort of treatment, with that in other
 parts of the United States.

1801

507

Dysentery is characterized by a discharge of
 white, fleshy mucus mixed with blood, great
 costiveness, and inflammatory action, much
 determination to the Liver, Liver enlarged,
 the function of the Liver much deranged,
 pouring out bile in large quantities and
 of a vitiated quality, the general opi-
 ion is, that the great constipation is
 owing to the acridness of the bile, rather
 than a collection of hardened faeces, these
 being seldom found in the discharges.
 Blood letting in the early stages frequen-
 tly produces happy effects, instead it can
 seldom be dispensed with. The second
 indication is, to overcome the consti-
 pation of the Bowels, which is often at-
 tended with much difficulty. Large
 doses of calomel sometimes combined
 with opium is the only medicine to
 which much dependence can be
 placed.



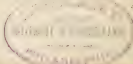
The third indication is, to produce a dis-
 semination in the surface of the body; the
 most effectual medicine for this purpose
 is a combination of Colomet Opium and
 Opacacuan, in small and frequently re-
 peated doses. After the first evacuation
 of the bowels there remains little dif-
 ficulty in keeping up the action by
 mild ~~laxatives~~ purgatives, castor oil being
 well adapted to the purpose. Blees-
 ters to the Abdomen frequently prove
 highly serviceable.

The bilious intermittent fevers are the
 most common and the most important
 of all the diseases of the West; they ap-
 pear in all the various states, from the
 most mild Intermittent to the most
 malignant Typhoid, and they all seem
 to derive their influence from a
 vitiated state of the Atmosphere.



little more he said of the Intermittent fever, as it bears nearly the same character in all parts of the United States. It annually visits nearly the whole of the Country West of the Alleghany Mountains. There is in this disease a great tendency to visceral obstruction, Purgative medicines are used largely, and the Peruvian Bark administered freely. The Intermittent frequently passes into a remittent, continued, and typhoid type, and there again into the Intermittent.

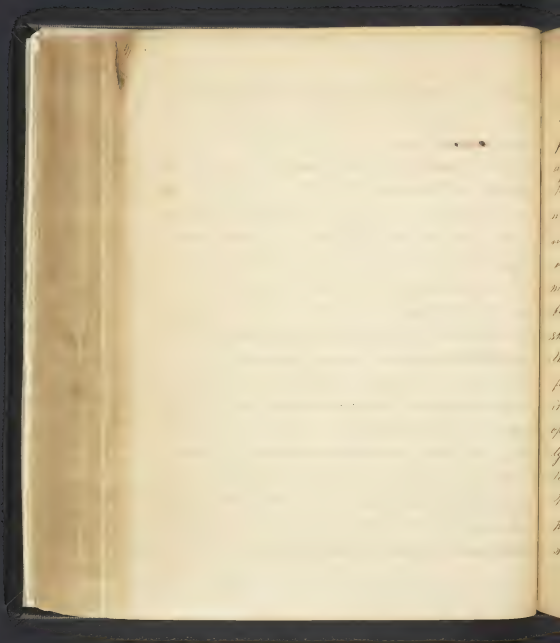
The symptoms of the bilious intermittent fever frequently varies according to the humidity, as the dryness of the atmosphere —, assuming an inflammatory nature, after frequent rains, but during dry seasons they ^{it has} have a strong tendency to fall into the typhoid state. It is usually attended with a full, slow and strong



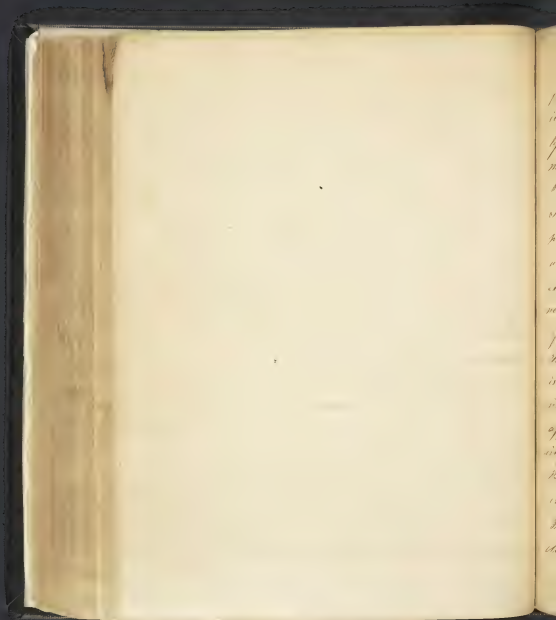


pulse, great thirst and flushed countenance; and great determinations to some internal ~~organ~~ organ, the Brain, the Liver, the Spleen and the Stomach, ~~and~~ the organs most affected. It seems to be the nature of the disease, that some one organ only shall be affected at a time. The Brain is most generally affected in the early part of the Summer, the Liver and Spleen in the Autumn, and the Lungs in the Winter and Spring. Sometimes a tendency to congestion continues ^{in one organ} throughout the warm season.

There is generally great costiveness, and a general torpor throughout the alimentary canal. The Stomach is generally very irritable, until the acrid contents shall be evacuated by an Emetic, when a large quantity of bile and viscid mucus is discharged, after which it will generally receive the other medicines without offence.



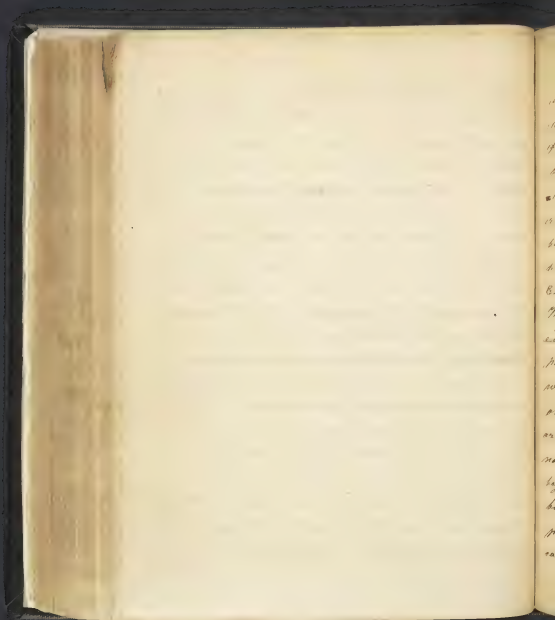
But such is the torpor of the bowels that very large doses of the most active medicines are frequently administered before they take any effect. This fever is attended with the usual symptoms which are observed in other parts of the country, and therefore unnecessary to repeat them here. The paroxysms pass through their usual stages, & mit and return in the ordinary manner, but the whole course frequently is much shorter than in some other parts of the United States. It frequently terminates favourably or otherwise in five or six days it sometimes terminates in three or four days on the fifth or sixth day, but generally continues until the fourth or fourth day from the first Paroxysm. The indications in this disease are very plain, but the treatment is very various. Some practitioners use the blood very



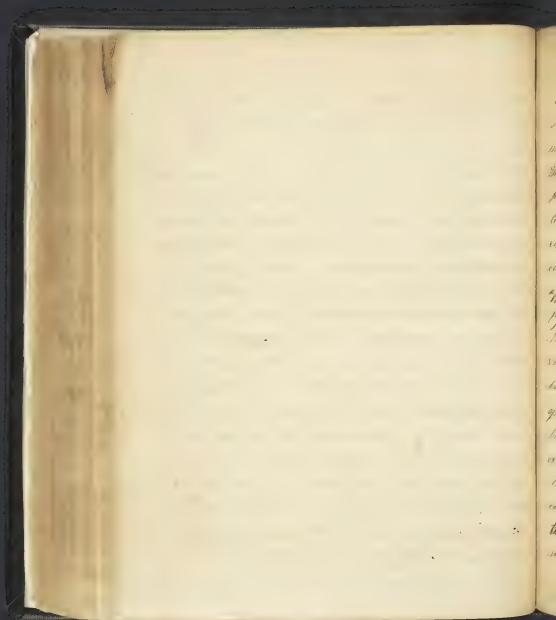
fully in the first stages, following it by Emetics
and Cathartics. while others depend entire-
ly on their medicines until a distinct re-
mission is obtained, when the Peruvian
Bark is administered with success;

Some use Tartar of Antimony so as to
produce full vomiting, while others
use it only in small and frequently repeat-
ed doses with good effect. And there are
not a few who always associate the use
of bilious fever, with a profuse salivation.
Mercury in this disease used as a Cathartic
is an invaluable medicine; and in some
instances the system requires to be slightly
affected, but a profuse discharge of saliva
in general is injurious, and never expedites
the cure.

A combination of these various practices
I have seen happily adopted. The first in-
dication is, to suppress the violent actions.



An elastic instrument, as a syringe, will
 do this more effectually than bloodletting.
 The second indication is to evacuate the
 bowels. There is generally such an accumu-
 lation of bile as to render the stomach re-
 ceivable, that scarcely any medicine will
 be retained, as it is a sufficient length of time
 to make an impression on the system.
 Emetics are therefore strongly indicated.
 They often do much more than merely
 evacuate the stomach, they make a
 powerful impression on the system
 which prepares it for the reception of
 other medicines. The most saline cath-
 artics are now resorted to, a combi-
 nation of Calomel & Jalap and gam-
 bage mostly has an admirable effect.
 but it sometimes requires to be
 repeated daily, until the alimentary
 canal is entirely evacuated.



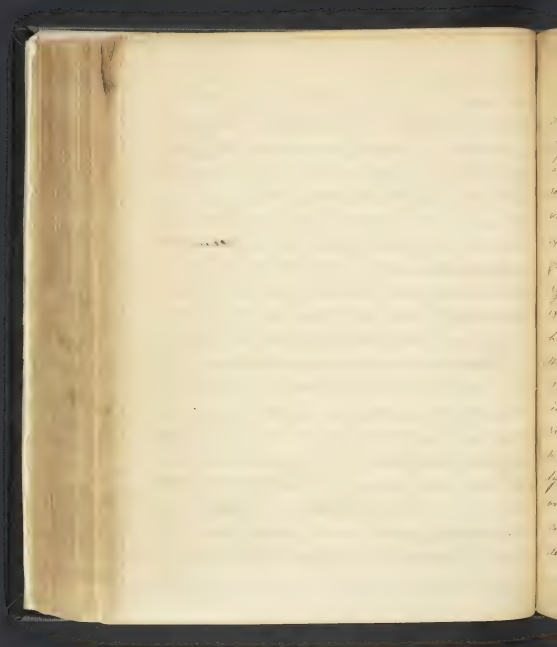
after which the fever abates and a distinct remission is observable, the Purge may be then administered with safety.

The warm bath is more times used to promote perspiration, and to relieve organic oppression. Colamel and opium in small and frequently repeated doses, with mercurial frictions, continued until the Jaws are slightly affected, frequently produce a most happy effect, the constipation is overcome, the febrile heat and thirst abating, the skin becoming soft and moist, and sometimes a distinct remission is the consequence. Colamel in some form is of unbounded utility in almost all the diseases of the West. As a purgative it is used largely with the most happy consequences, combined with diaphoretics it is of the highest value, as a sialagogue it is used far less frequently, it soothes the patient

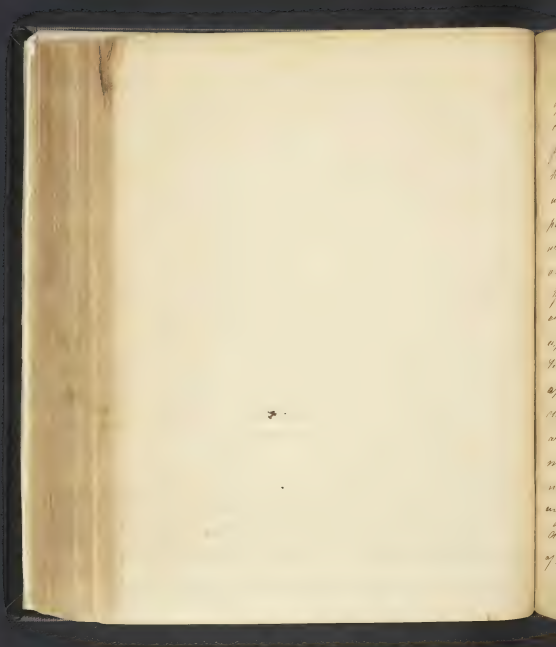
11

v

and seldom is necessary to the cure of Malaria
 remittent fever. Tartaric of Antimony
 is used largely, and requires doubtless the quan-
 tity usually recommended in the Books to
 produce full vomiting. During the
 paroxysm the Antimonial preparations
 have a powerful effect in relieving the
 distress and anxiety. When the vessels
 have been once drained from their
 torpidity, the action is easily kept
 up by the milder purgatives, until
 a distinct remission is obtained, when
 the Bark and other tonics are adminis-
 tered with propriety. A few days of
 this kind of treatment will generally
 bring the patient into a regular inter-
 mittent or a continued state of conval-
 escence. The prostrate or Typhoid
 state of this fever seems to require a
 mode of treatment different from any

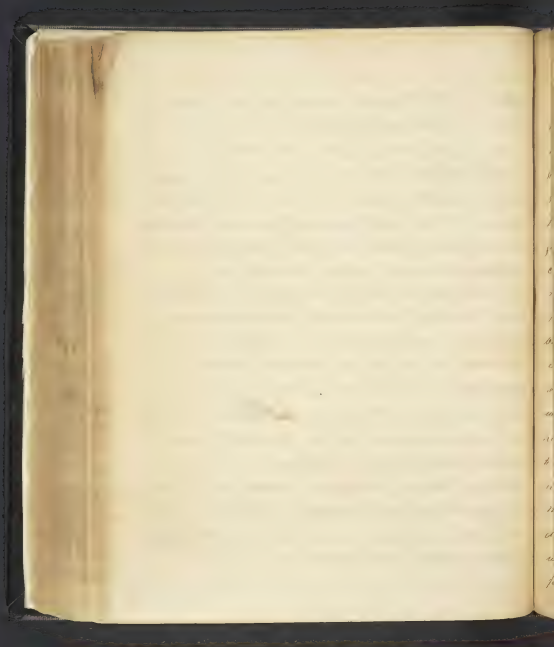


that I have not seen in 10 weeks but I do not know that it is peculiar to the Western country. This fever is frequently attended with a depressive state of the system, the pulse small, hard and irregular as in the miliary, as if labouring to relieve itself of a load. The extremities shew little more cold. The thirst great and the skin dry and hot, with many symptoms of internal congestions. The excrementa generally confined to the blood, lungs or Liver. The stomach and intestines much disordered. The patient is either with faintness or comatose, in consequence of vapor coming on and Death ends the scene. Where there is great determination to the lungs, Bloodletting is superfluous by leeches, Blisters over the chest and on the extremities are generally applied, and the bowels are evacuated by a glyster. When the Brain has been affected



Opening the Jugular vein, and the applica-
 tion, of Cold water to the head has been
 found highly beneficial. Blisters applied
 to the extremities the Body sponged with Cold
 water and the bowels evacuated by enemas
 purge. These will generally relieve the most
 urgent symptoms when the Brain and the
 other viscera are administered freely.

If the liver be the organ affected, a Blister
 over the part and on the extremities is
 applied. and Calomel in large condensation.
 Two doses is found generally to relieve the
 affections. While the evacuations, reme-
 dies are in use the Diffusible ^{of} stimulents
 are given to keep up an agreeable excite-
 ment and allay irritation. The stim-
 ulating tonics, such as Wine, Brandy or
 any of the preparations of Alcohol, and
 Cinchona bark are used as soon as the state
 of the system will admit.



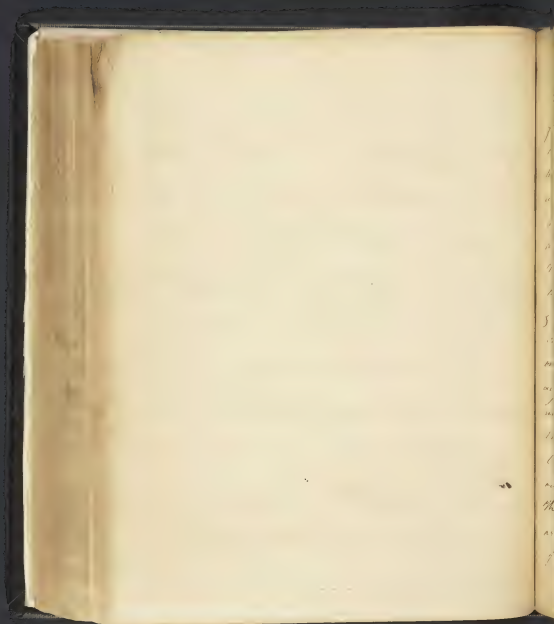
This state of fever is sometimes induced by
the free use of evacuating remedies or the
long delay of the Venies; In such cases the us-
ual practice is, to use the most powerful
stimulant Ants and Tonics, and at the same
time, keep the bowels open, by mild pur-
gatives; apply blisters to the extremities, and
cold applications to the Head.

It now only remains for me to speak of the malignant, grade of fever that occasionally visits the larger towns; which are situated on the borders of rivers and adjacent to some marsh, or extensive low land; which is frequently overflowed by the rise of the rivers. They are of course exposed to the general influence of the atmosphere; an increase of humidity, and a marsh miasmata. During the last summer, an Epidemic prevailed at Louisville Kentucky where it was particularly of excessive and fatal.

11

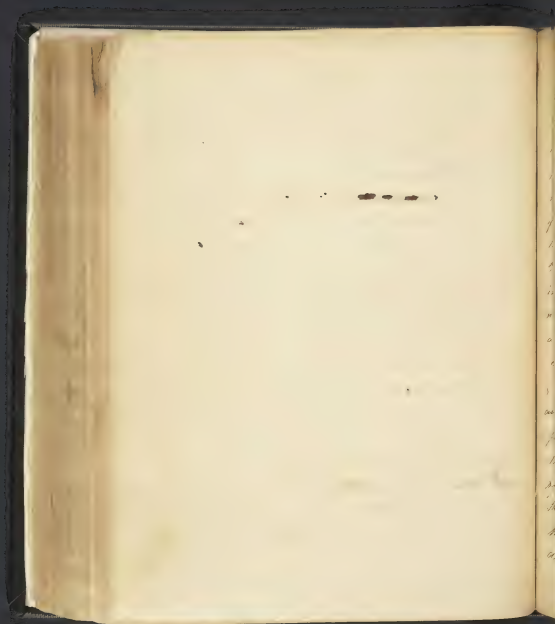
For a detailed account of which, I am indebted
to Dr Harrison a resident Physician, of that
place. Louisville is situated immediately
on the bank of the river, a small Creek
just in sight below the shore, about the
mouth of which much vegetable matter of
kinds collects. There is a portion of flat land
filled with ponds of water in the early part
of summer, extending several miles.
The river continues along its margin for
a considerable distance.

"The fever" says Dr Harrison "commenced in
the last of June, but did not excite much
alarm until the last of July, when it be-
came very generally prevailing in almost
every family, and extending its noxious
influence, twenty miles through the coun-
try, gradually taking its characteristic pa-
tures and gathering into the common bit-
terness of fever.



The system in most cases, was in a state of great oppression; Muscular strength scarcely and excessively reduced. The pulse sometimes throbbing and irregular, at other small and hard; and frequently the vibrations are depressed, pulse was obscure. The Liver and Spleen engorged or distended with blood. The former secreting very little bile and that of an altered quality. There was usually great costiveness, and the Stomach were irritable, few medicines could be retained on it a sufficient length of time to produce any good effect. The fever seldom remitted more till the fifth or sixth day, and ~~was~~ some times proved fatal on the fourth day.

A remitting of dark, flaky matter occa-
sionally took place, after which, none recovered.
The skin was seldom more yellow than in
ordinary cases of bilious ~~fever~~ remittent
fever.



It did not appear in any case to be contagious, but to depend on a peculiar state of the atmosphere, which became ~~leprosy~~ ^{leprosy} in proportion to the distance from the Town. From the ~~autopsy~~ ^{dissection} it was found, that the liver and spleen were much distended with blood, and very easily lacerated. The internal coat of the stomach in some instances ^{was} entirely destroyed, and the intestinal canal much inflamed; in such cases a something of dark, stony matter, had preceded death. The lungs and the Brain generally natural. The latter sometimes in an inflamed state, and the former much filled with mucus. From the result of these examinations we ~~are~~ as well as the symptoms, we must conclude that the stomach was the principal seat of the disease. The treatment of this disease was at first very various, but

after a time a regular practice was established and generally proved successful.

In the first stage of the fever, but not after the third day, bloodletting was found to produce an admirable effect. Emetics were generally injurious and sometimes fatal. Calomel seemed the only medicine that would live in the stomach, or produce any good effect. Indeed it was the too often remedy. It was given, largely when the stomach would bear it, but the irritability of that organ was frequently so great, that small doses combined with opium only could be used. There were, repeated every hour until a slight affection of the gums was perceptible. At this time, the bowels were generally given away. The irritability of the stomach then be reduced, and all the symptoms abated. After the effects of the Mercury had pervaded the system, there was but little dif-

iculty in keeping the bowels open by mild purgatives. Blisters were used on the extremities and Epigastrium with some benefit.

The most distinguished attribute of this fever was, that it would not bear the Bark in any shape, the most mild tonics only were admissible after a distinct remission.

The patients generally recovered in about four or five weeks, but when removed from ~~within~~ the influence of the affected atmosphere, they recovered much sooner. Rather more than two hundred fell victims to the Epidemic, in a population of about five thousand."

I have received accounts of this disease, as it prevailed in several other towns, all of which appear to be very similar to the above description, and therefore it will not be necessary to say much about them. The treatment in different places, being so various

that it seems difficult to ascertain the means of any particular mode of cure.

I think it will appear evident from the above description of the different diseases, that they depend on one common cause, this cause, varying only in degree, and modified by some peculiar circumstances. Thus, we see them attacking the same parts of the body, running a similar course, requiring a similarity of treatment, and varying in exact proportion to the intensity of the disease. One cause only is observable, and the diseases increase in exact proportion as that cause is developed.

The South West winds evidently contain much miasmatic influence, spreading it over the whole country, producing bilious derangement, debilitating the digestive organs, and destroying the bal-

ance of the system. The intense heat of the
 Sun relaxing muscular fibres, and the cool
 and damp nights ~~with~~ ^{with} perspirations.
 Thus, the system is prepared to resist under
 any angustiations of the cause, arising
 from low and damp situation as in the
 neighbourhood of Marshes; where unfortu-
 nately many of the principal factors
 are situated.

When the thick Forest shall be removed
 the product of agriculture properly
 preserved. The Marshes drained; and the
 Inhabitants observing a ^{more} ~~strict~~ temper-
 ance. We may expect to find the cause
 of the fever removed. And when the science
 of Medicine becomes properly ap-
 plied to practical purposes, we then may
 expect to find the diseases of the West-
 ern Country divested of half of their
 Terrors.

Handwritten text, likely bleed-through from the reverse side of the page. The text is arranged in approximately 20 horizontal lines. A small, dark, circular ink mark or smudge is visible near the bottom center of the page.